



UK Health Alliance
on Climate Change

Local Government, Housing,
and Planning Committee
Scottish Government,
St Andrew's House,
Edinburgh EH1 3DG

18 November 2024

Dear committee members,

I write to you as the Chair of the UK Health Alliance on Climate Change* to urge the Scottish Government to reconsider its decision to halt the ban on wood-burning stoves, multi-fuel stoves, and pellet stoves in urban new builds. While Scotland has made significant progress in improving outdoor air quality, indoor air pollution remains a critical and overlooked issue. Allowing the widespread installation of wood burners risks undoing these gains and endangering public health and increasing economic burden.

Health Impacts and Costs:

Domestic wood burning is the largest source of fine particulate matter (PM2.5) in the UK, accounting for 22% of emissions—surpassing even transportation. Exposure to PM2.5 is linked to severe health issues, including respiratory and cardiovascular diseases, cancer, and developmental problems in children. Notably, "ecodesign" stoves emit 450 times more PM2.5 than gas boilers, exacerbating urban air pollution and endangering public health. Even though wood burning produces only 6% of heat in the UK, it is associated with £0.9 billion in health-related damages.

The associated health damage costs to society are stark. For example:

- **A family of four** using an eco-stove with well-seasoned wood incurs **damage costs of £9,060 over 15 years** when **wood burners provide 80% of heat**.
- For an older couple in the same scenario, the cost is £8,171.

These costs skyrocket with inefficient use. A family of four using damp wood in an older stove faces damage costs of £39,243, while an older couple faces costs of £39,106. Damage costs encompass asthma incidence, hospital admissions for respiratory issues, and even structural damage to buildings, representing a significant societal burden.

Economic Impact:

Further, contrary to perceptions of cost-effectiveness, wood-burning stoves are more expensive than central heating options. [Research indicates](#) that using a wood burner for 20% of home heating incurs annual costs 24% higher (at £2,028 – £2,204 per year) than a gas boiler. For 80% usage, the costs are 47%–48% higher (at £2,433 – £2,614 per year). These figures highlight the financial disadvantages of wood burners compared to gas boilers and air-source heat pumps.

Environmental Concerns:

Wood burning is not an environmentally friendly form of heating. It produces more harmful carbon dioxide (CO₂) emissions compared to other heating methods. The reabsorption of CO₂ by growing ecosystems takes years, decades, or even a century, depending on forest management and biomass sources. This delayed carbon offset undermines efforts to combat climate change.

While concerns about rural heating needs are valid, exemptions for emergency and off-grid use can be maintained without jeopardising urban air quality. Rural and urban settings face vastly different risks, and policy should reflect this. Gas boilers, with PM2.5 emissions nearly eight times lower than wood stoves, offer a far cleaner alternative. However, new builds present a unique opportunity to incorporate the cleanest option with practically zero emissions; electric stoves. The [2024 Lancet Countdown on Health and Climate Change policy brief](#) has called on the UK governments to “develop a framework to implement a just transition away from wood burning to clean fuels in urban and rural areas”. Reinstating the ban on wood burners in urban new builds would protect public health, reduce health inequalities, and align with Scotland’s leadership in air quality and climate action. We urge you to prioritise evidence-based decision-making and reverse this decision to safeguard Scotland’s future.

Kind regards,
Richard Smith CBE FMedSci
Chair, UK Health Alliance on Climate Change

**The UK Health Alliance on Climate Change is an alliance of 49 UK-based health organisations including Royal Colleges, journals, associations and societies representing more than one million health professionals, a significant proportion of the NHS workforce.*